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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/098,597	03/18/2002	Chin-Yi Chiang	MR3003-12	7644
4586	7590	06/29/2004	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			PATEL, NIMESH G	
			ART UNIT	PAPER NUMBER
			2112	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/098,597

Applicant(s)

CHIANG ET AL.

Examiner

Nimesh G Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,7-9 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 2-6 and 10-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 15 recites the limitation "said corresponding switching devices" in line 3 of page
14. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1, 8-9, and 14-15 are rejected under 35 U.S.C. 102(a) as being anticipated by the admitted prior art.
6. Regarding claim 1, the admitted prior art discloses a USB control circuit with an automatic route-switching function, comprising: a plurality of USB pads(Figure 1, 121-127), connecting a plurality of USB devices(Paragraph 7); a plurality of USB transceivers(Figure 1, 141-147), each connected to one corresponding USB pad; at least one USB host/hub controller(Figure 1, 15, 17), each connected to at least one corresponding USB transceivers, so as to control and drive said USB devices connected to said corresponding USB pads by said corresponding USB transceivers(Paragraph 7); a plurality of port routing controllers(Figure 1,

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19), each connected to one corresponding USB transceiver; at least one enhanced USB transceiver(Figure 1, 16), each connected to each of said USB pads and each of said port routing controllers; an enhanced USB host/hub controller(Figure 1, 13), connected to each of said enhanced USB transceivers, so as to control and drive at least one enhanced USB device connected to said corresponding USB pads by using said corresponding enhanced USB transceivers(Paragraph 7); and an enhanced device routing controller(Figure 1, 19), connected to each of said port routing controllers, so as to automatically switch USB pads that connect enhanced USB devices to said enhanced USB transceivers to be controlled by said enhanced USB host/hub controller(Paragraph 7; the port routing controller in the admitted prior art performs the duties of both the enhanced device routing controller and the port controlled claimed by the applicant).

7. Regarding claim 8, the admitted prior art discloses a USB control circuit, wherein said control circuit can be integrated in one of a south bridge chipset and an USB hub controller design(Figure 1).

8. Regarding claim 9, the admitted prior art discloses a USB control circuit with an automatic route-switching function, comprising: a plurality of USB pads(Figure 1, 121-127), connecting a plurality of USB devices(Paragraph 7); a plurality of switching devices, each connected to one corresponding USB pad; a plurality of USB transceivers, each connected to one corresponding USB pad(Paragraph 7); a plurality of USB transceivers(Figure 1, 141-147), each connected to one corresponding USB pad; at least one USB host/hub controller(Figure 1, 15, 17), each connected to at least one corresponding USB transceivers, so as to control and drive said USB devices connected to said corresponding USB pads by said corresponding USB transceivers(Paragraph 7); at least one enhanced USB transceiver(Figure 1, 16), each connected to each of said switching devices; an enhanced USB host/hub controller(Figure 1,

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13), connected to each of said enhanced USB transceivers, so as to control and drive at least one enhanced USB device connected to said corresponding USB pads by using said corresponding enhanced USB transceivers(Paragraph 7); and an integrated routing controller, connected to each of said USB transceivers and each of said enhanced USB transceivers(Figure 1, 19), so as to automatically switch USB pads that connect enhanced USB devices to said enhanced USB transceivers to be controlled by said enhanced USB host/hub controller(Paragraph 7; the integrated routing controller in the admitted prior art performs the duties of both the enhanced device routing controller and the port controlled claimed by the applicant).

9. Regarding claim 14, the admitted prior art discloses a USB control circuit, wherein said control circuit can be integrated in one of a south bridge chipset and an USB hub controller design(Figure 1).

10. Regarding claim 15, the examiner assumes "said corresponding switching devices" means "switching devices" to analyze his claim. The admitted prior art discloses a USB control circuit with an automatic route-switching function, comprising: a plurality of USB pads(Figure 1, 121-127), connecting a plurality of USB devices(Paragraph 7); a plurality of USB transceivers(Figure 1, 141-147), each connected to one corresponding USB pad; at least one USB host/hub controller(Figure 1, 15, 17), each connected to at least one corresponding USB transceivers, so as to control and drive said USB devices connected to said corresponding USB pads by said corresponding USB transceivers(Paragraph 7); at least one enhanced USB transceiver(Figure 1, 16), each connected to each of said USB pads via each of said corresponding switching devices; an enhanced USB host/hub controller(Figure 1, 13), connected to each of said enhanced USB transceivers, so as to control and drive at least one

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enhanced USB device connected to said corresponding USB pads by using said corresponding enhanced USB transceivers(Paragraph 7).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, in view of the EHCI Specification, Revision 0.96.

14. Regarding claim 7, the admitted prior art does not specifically disclose a USB control circuit, wherein each of said port routing controllers comprises a port status register. However, the EHCI Specification discloses a USB control circuit, wherein each of said port routing controllers comprises a port status register(Section 4.2). Therefore it would have been obvious to use port status register in the system of the admitted prior art since it is a standard register that is used commonly in USB systems.

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15. Regarding claim 13, the admitted prior art does not specifically disclose a USB control circuit, wherein said integrated routing controller comprises a plurality of port status registers. However, the EHCI Specification discloses a USB control circuit, wherein said integrated routing controller comprises a plurality of port status registers(Section 4.2). Therefore it would have been obvious to use port status registers in the system of the admitted prior art since it is a standard register that is used commonly in USB systems.

Allowable Subject Matter

16. Claims 2-6 and 10-12 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited further disclose art related to port routing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nimesh G Patel whose telephone number is 703-305-7583. The examiner can normally be reached on M-F, 8:30-6:00.

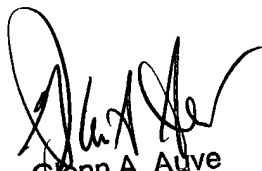
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nimesh G Patel
Examiner
Art Unit 2112

NP NP
June 23, 2004



Glenn A. Auve
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